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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,698	06/16/2005	Mihaela Van Der Schaar	PHUS020585	6569

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EXAMINER

CHOKSHI, PINKAL R

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2623

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,698	Applicant(s) VAN DER SCHAAR ET AL.	
	Examiner PINKAL CHOKSHI	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication 2002/0002708 A1 to Arye ET al (hereafter referenced as Arye) in view of US Patent 6,470,378 B1 to Tracton ET al (hereafter referenced as Tracton).

Regarding **claim 1**, "a receiver-driven streaming method" reads on the system for reception of multimedia information (abstract) disclosed by Arye and as represented in Fig. 1. As to "a method comprising: receiving an original coded video stream from a transmitter at a receiver" Arye discloses (§10037) that multimedia contents with video streams having a primary bandwidth are transmitted to receiver.

As to "measuring an available bit rate at the receiver" Arye discloses (§10050) that the bandwidth scaler calculates bit rate for primary multimedia stream transmitted to receiver.

As to "receiving the requested switching stream from the transmitter at the receiver and receiving the requested coded video stream from the transmitter at the receiver" Arye discloses (§10056) that the smart terminal receives plurality of sub-streams for each received multimedia stream. Arye further discloses

(¶0057) that the smart terminal receives and selects sub-stream having the highest bit-rate as well as switches to another sub-stream with a lower bit rate when higher bit-rate sub stream starts having unacceptable reception quality.

As to "sending a request for a different coded video stream and a switching stream based on the available bit rate from the receiver to the transmitter" Arye discloses (¶0052) that the receiver configured to receive multimedia content and secondary multimedia sub-streams from transmitter based on its bit-rate.

Arye meets all the limitations of the claim except "sending a request from the receiver to the transmitter." However, Tracton discloses (col.3, lines 40-44) that the sever receives a request for data from the client. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to send a request for different video stream as taught by Tracton so the client that does not have certain codecs, processing power, or network bandwidth can view the content as well (col.3, lines 45-46).

Regarding **claim 2**, "the receiver and the transmitter coupled to each other through a network" Arye discloses (¶0026 and ¶0052) that the smart terminal (receiver) receives the multimedia content from the multimedia source (transmitter) over a network.

Regarding **claim 3**, Arye meets all the limitations of the claim except “the transmitter operable to store at least three coded video streams and at least four switching streams for each of a plurality of video streams.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 4**, Arye meets all the limitations of the claim except “the transmitter operable to store at least three coded video streams and at least six switching streams for each of a plurality of video streams.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of

video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 5**, "a receiver-driven streaming method comprising: transmitting an original coded video stream from a transmitter to a receiver" Arye discloses (§0037) that multimedia contents with video streams having a primary bandwidth are transmitted to receiver.

As to "transmitting the requested switching stream from the transmitter to the receiver and transmitting the requested coded video stream from the transmitter to the receiver" Arye discloses (§0056) that the smart terminal receives plurality of sub-streams for each received multimedia stream. Arye further discloses (§0057) that the smart terminal receives and selects sub-stream having the highest bit-rate as well as switches to another sub-stream with a lower bit rate when higher bit-rate sub stream starts having unacceptable reception quality.

As to "receiving a request for a different coded video stream and a switching stream from the receiver at the transmitter" Arye discloses (§0052) that the receiver configured to receive multimedia content and secondary multimedia sub-streams from transmitter based on its bit-rate.

Arye meets all the limitations of the claim except "sending a request from the receiver to the transmitter." However, Tracton discloses (col.3, lines 40-44) that the sever receives a request for data from the client. Therefore, it would

have been obvious to one of ordinary skills in the art at the time of the invention to send a request for different video stream as taught by Tracton so the client that does not have certain codecs, processing power, or network bandwidth can view the content as well (col.3, lines 45-46).

Regarding **claim 6**, "the method further comprising: coding a plurality of video streams at a plurality of bit rates at the transmitter" Arye discloses (§0050) that the content switch in multimedia source configures bit rate for multimedia streams to primary (high), secondary (low) bit rates.

Arye meets all the limitations of the claim except "storing each of the coded video streams in a separate track at the transmitter." However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources as represented in Fig. 4 (elements 122, 124, 126). Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to store video streams in a separate places as taught by Tracton in order to quickly transmit video stream from a specific place in the storage device to receiver without using time for searching the stream.

Regarding **claim 7**, "the method further comprising transmitting from the transmitter to the receiver data to inform the receiver of the plurality of bit rates corresponding to the stored coded video streams" Arye discloses (§10057) that the smart terminal has an option to select video streams with high or low bit rates.

Regarding **claim 8**, Arye meets all the limitations of the claim except "the method further comprising storing each of a plurality of switching streams in a separate track at the transmitter." However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources as represented in Fig. 4 (elements 122, 124, 126). Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to store video streams in a separate places as taught by Tracton in order to quickly transmit video stream from a specific place in the storage device to receiver without using time for searching the stream.

Regarding **claim 9**, Arye meets all the limitations of the claim except "the method further comprising storing in separate tracks at the transmitter at least three coded video streams and at least four switching streams for each of a

plurality of video streams.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 10**, Arye meets all the limitations of the claim except “the method further comprising storing in separate tracks at the transmitter at least three coded video streams and at least six switching streams for each of a plurality of video streams.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 11**, "a receiver-driven streaming system, comprising: a computer-processable medium and logic stored on the computer-processable medium" Arye discloses (§0054) that his invention can be implemented on the memory/chip by using specific purpose computer or a specially programmed computer.

As to "the logic operable to receive an original coded video stream" Arye discloses (§0037) that multimedia contents with video streams having a primary bandwidth are transmitted to receiver. As to "measure an available bit rate" Arye discloses (§0050) that the bandwidth scaler calculates bit rate for primary multimedia stream transmitted to receiver. As to "a switching stream based on the available bit rate to receive the requested switching stream, and to receive the requested coded video stream" Arye discloses (§0052) that the receiver configured to receive multimedia content and secondary multimedia sub-streams from transmitter based on its bit-rate.

Arye meets all the limitations of the claim except "send a request for a different coded video stream." However, Tracton discloses (col.3, lines 40-44) that the sever receives a request for data from the client. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to send a request for different video stream as taught by Tracton so the client that does not have certain codecs, processing power, or network bandwidth can view the content as well (col.3, lines 45-46).

Regarding **claim 12**, "a receiver-driven streaming system, comprising: a computer-processable medium and logic stored on the computer-processable medium" Arye discloses (§0054) that his invention can be implemented on the memory/chip by using specific purpose computer or a specially programmed computer.

As to "the logic operable to transmit an original coded video stream" Arye discloses (§0037) that multimedia contents with video streams having a primary bandwidth are transmitted to receiver. As to "transmit the requested switching stream, and to transmit the requested coded video stream" Arye discloses (§0052) that the receiver configured to receive multimedia content and secondary multimedia sub-streams from transmitter based on its bit-rate.

Arye meets all the limitations of the claim except "receive a request for a different coded video stream and a switching stream." However, Tracton discloses (col.3, lines 40-44) that the sever receives a request for data from the client. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to send a request for different video stream as taught by Tracton so the client that does not have certain codecs, processing power, or network bandwidth can view the content as well (col.3, lines 45-46).

Regarding **claim 13**, "the logic further operable to code a plurality of video streams at a plurality of bit rates" Arye discloses (§0050) that the content switch

in multimedia source configures bit rate for multimedia streams to primary (high), secondary (low) bit rates. As to “transmit data to inform a receiver of the plurality of bit rates corresponding to the stored coded video streams” Arye discloses (¶0057) that the smart terminal has an option to select video streams with high or low bit rates.

Arye meets all the limitations of the claim except “store each of the coded video streams in a separate track.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources as represented in Fig. 4 (elements 122, 124, 126). Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to store video streams in a separate places as taught by Tracton in order to quickly transmit video stream from a specific place in the storage device to receiver without using time for searching the stream.

Regarding **claim 14**, Arye meets all the limitations of the claim except “the logic further operable to store each of a plurality of switching streams in a separate track.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources as represented in Fig. 4 (elements 122, 124, 126). Tracton further

discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to store video streams in a separate places as taught by Tracton in order to quickly transmit video stream from a specific place in the storage device to receiver without using time for searching the stream.

Regarding **claim 15**, Arye meets all the limitations of the claim except “the logic further operable to store in separate tracks at least three coded video streams and at least four switching streams for each of a plurality of video streams.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 16**, Arye meets all the limitations of the claim except “the logic further operable to store in separate tracks at least three coded video streams and at least six switching streams for each of a plurality of video streams.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 17**, “a receiver-driven video stream, comprising: an original coded video stream” Arye discloses (¶0037) that multimedia contents with video streams having a primary bandwidth are transmitted to receiver.

As to “measuring an available bit rate at the receiver” Arye discloses (¶0050) that the bandwidth scaler calculates bit rate for primary multimedia stream transmitted to receiver. As to “sending a request for the different coded video stream and the switching stream based on the available bit rate” Arye discloses (¶0052) that the receiver configured to receive multimedia content and secondary multimedia sub-streams from transmitter based on its bit-rate.

Arye meets all the limitations of the claim except "a different coded video stream and a switching stream requested by a receiver." However, Tracton discloses (col.3, lines 40-44) that the sever receives a request for data from the client. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to send a request for different video stream as taught by Tracton so the client that does not have certain codecs, processing power, or network bandwidth can view the content as well (col.3, lines 45-46).

Regarding **claim 18**, Arye meets all the limitations of the claim except "the receiver-driven video stream wherein the original coded video stream, the different coded video stream and the switching stream are selected from at least three coded video streams and at least four switching streams." However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams so the user has an option to select desired bandwidth video stream. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 19**, Arye meets all the limitations of the claim except “the receiver-driven video stream wherein the original coded video stream, the different coded video stream and the switching stream are selected from at least three coded video streams and at least six switching streams.” However, Tracton discloses (col.4, lines 28-32) that the server has multiple bandwidth sources that stores different bit rate streams within these sources. Tracton further discloses (col.4, lines 33-49) that the streams stored in multiple sources are stored as MPEG-2 and MPEG standard has several coding formats for different bandwidth streams so the user has an option to select desired bandwidth video stream. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to use multiple bit-rate streams for a plurality of video streams as taught by Tracton in order to allow the server to modify its output to meet the capabilities of client machine (col.3, lines 4-6).

Regarding **claim 20**, “the receiver-driven video stream wherein streaming of the original coded video stream, the different coded video stream and the switching stream is based at least in part on one or more hinting tracks each corresponding to one of a plurality of coded video streams coded at different bit rates” Arye discloses (¶0025 and ¶0052) that the receiver is configured to receive multimedia content, secondary multimedia sub-streams and plurality of snap shot

that depends on the sub-stream from transmitter based on its bit-rate. Arye further discloses (§0056) that the smart terminal receives plurality of sub-streams and snap shot depended on the sub-stream for each received multimedia stream. Arye further discloses (§0057) that the smart terminal receives and selects sub-stream having the highest bit-rate as well as switches to another sub-stream with a lower bit rate when higher bit-rate sub stream starts having unacceptable reception quality.

As to "one or more hinting tracks each corresponding to one of a plurality of switching streams for switching from a coded video stream at a first bit rate to a coded video stream at a second bit rate" Arye discloses (§0016) that the smart terminal switches the lower secondary multimedia content with low bit rate to higher primary multimedia content with high bit rate of the matching video stream.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - US Patent 7,086,077 B2 to Giammaressi et al discloses an apparatus for allocating bandwidth within a bandwidth constrained interactive information distribution system.
 - US Publication 2002/0144266 A1 to Godlman et al discloses a system to regulate the quality of broadcast by utilizing a back channel.

- US Patent 6,175,871 B1 to Schuster et al discloses an apparatus for real time communication over packet network.
- US Patent 6,832,241 B2 to Tracton et al discloses media content customization in a client server environment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PINKAL CHOKSHI whose telephone number is (571)270-3317. The examiner can normally be reached on Monday-Friday 8 - 5 pm (Alt. Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PRC/


BRIAN PENDLETON
SUPERVISORY PATENT EXAMINER